Astrometric Catalogs: Untangling the Acronym Jungle

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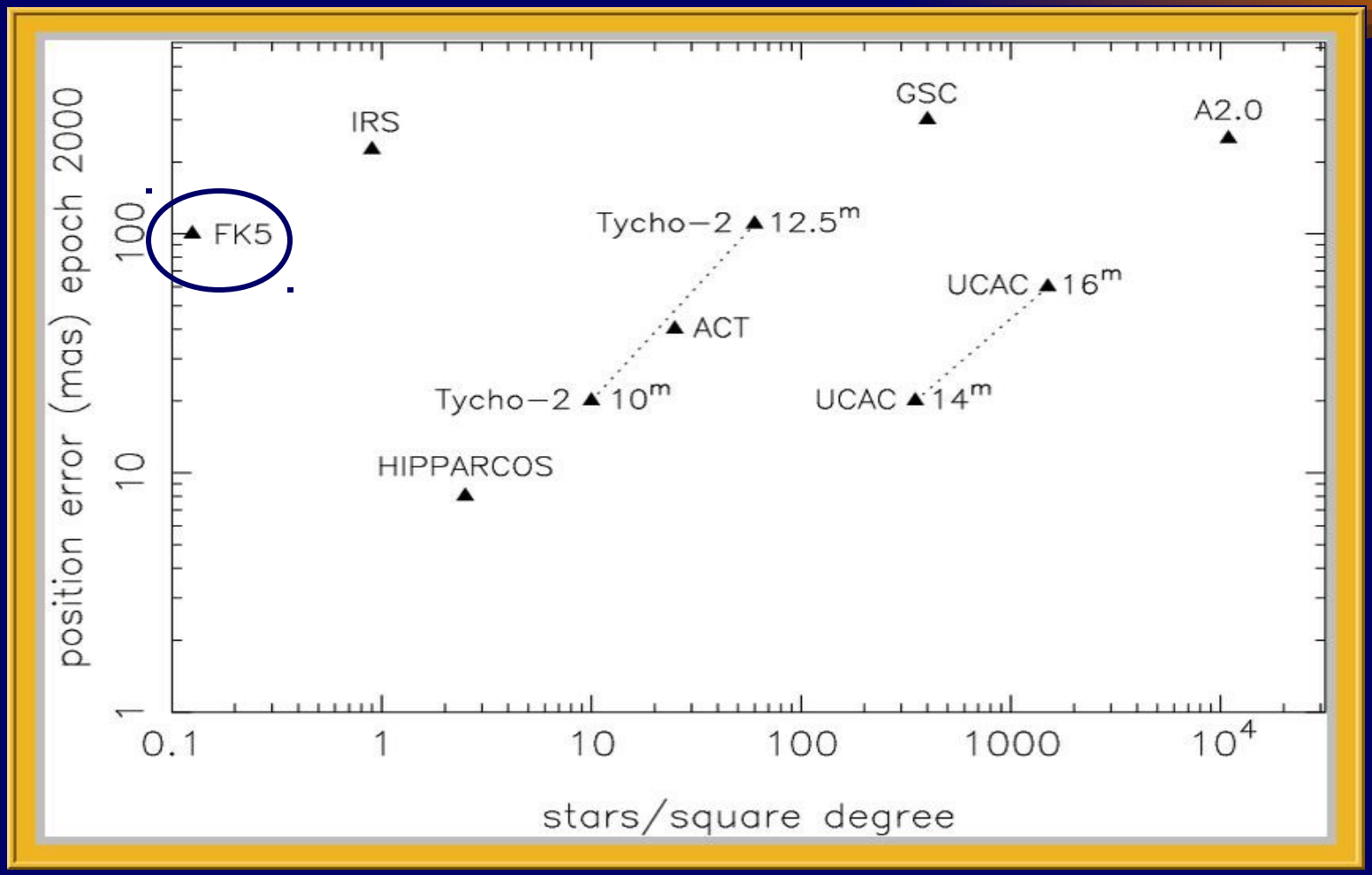
Major Astrometric Catalogs



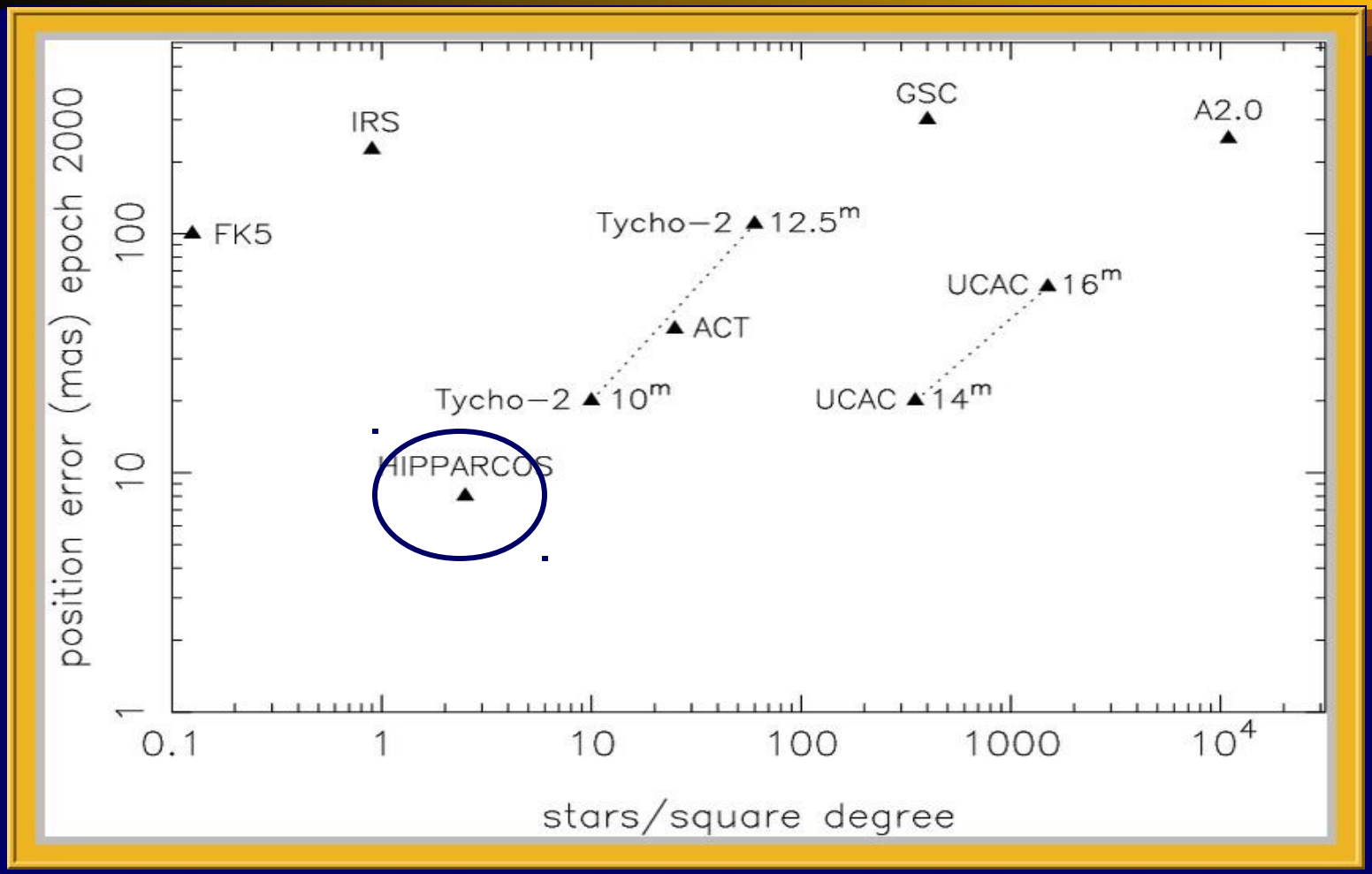
FK5 – Old Standard

- Number of stars: 4652
- Mag. Range: 0 to 9 (sparse beyond 6)
- Accuracies (2000)
  - Pos = 100 mas; P.M = 2 mas/yr
- Transit circle data – long epoch span
- Obsolete by Hipparcos

Obsolete FK5-based Catalogs

- IRS – International Reference Stars
- ACRS – Astrographic Cat. Reference Stars
- PMM – Positions and Proper Motions
- SAO – All incarnations

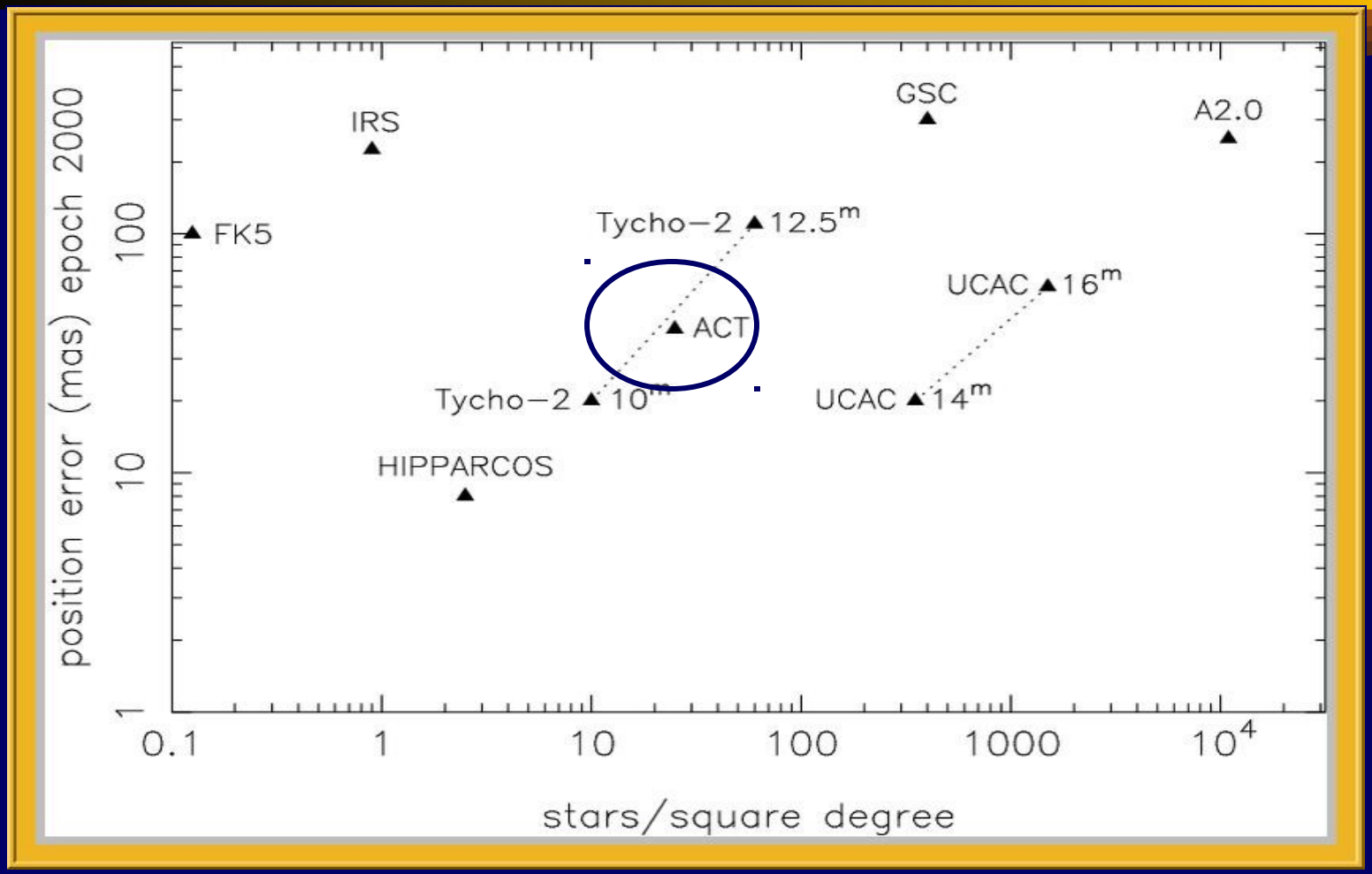
Major Astrometric Catalogs



Hipparcos – New Standard

- Number of stars: 118,000
- Accuracies (2000)
  - Positions: 10 mas
  - Proper motions: 1-2 mas
- HIP satellite observations
- Not obsolete
- More detailed talk following

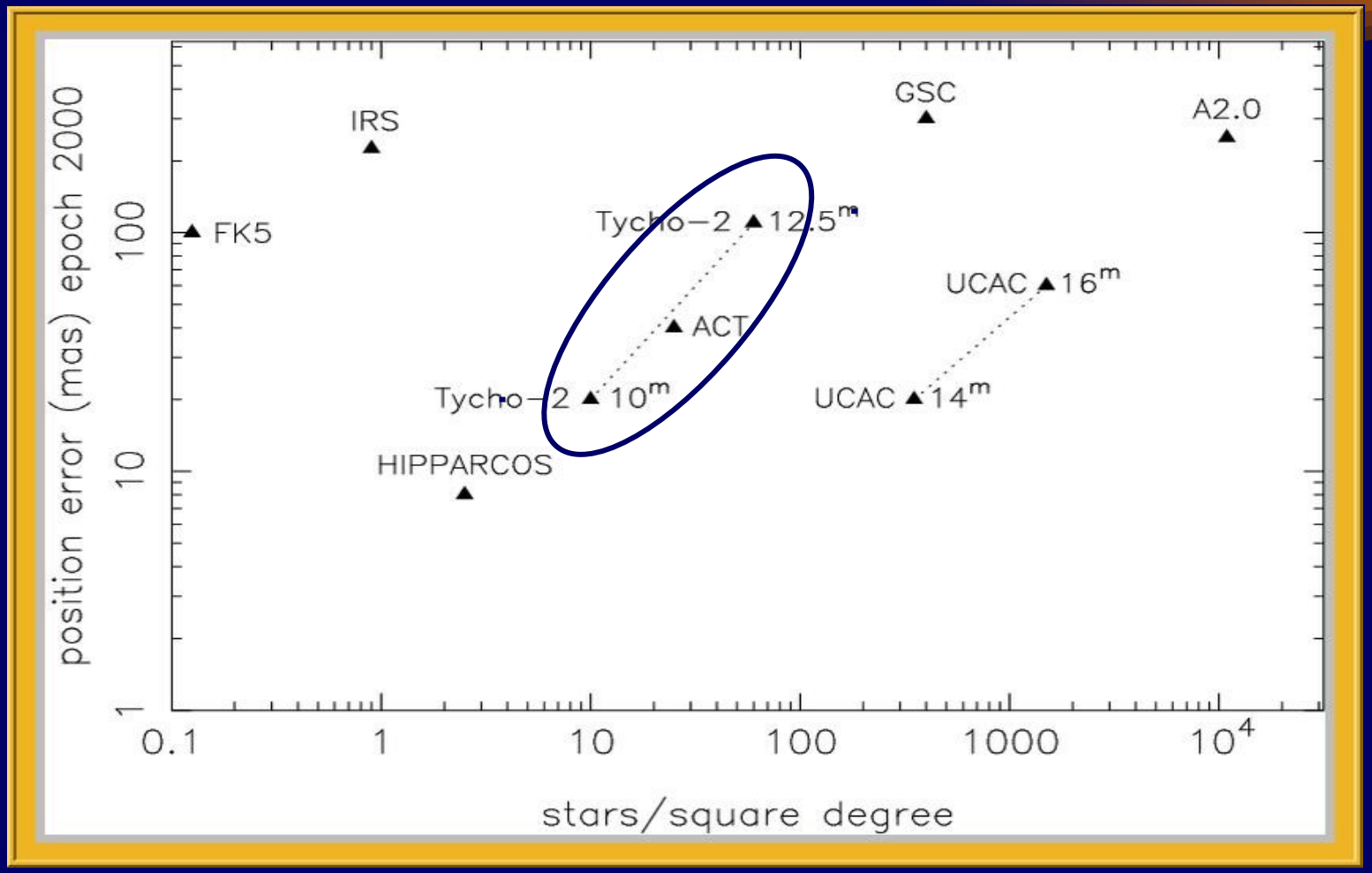
Major Astrometric Catalogs



ACT Reference Catalog

- Number of stars: 998,758
- Mag. Range: 4th to 11th
- Accuracies (2000)
  - Pos = 40 mas; P.M. = 3 mas/yr
- Tycho (on HIP) and AC
- Obsolete by Tycho-2

Major Astrometric Catalogs



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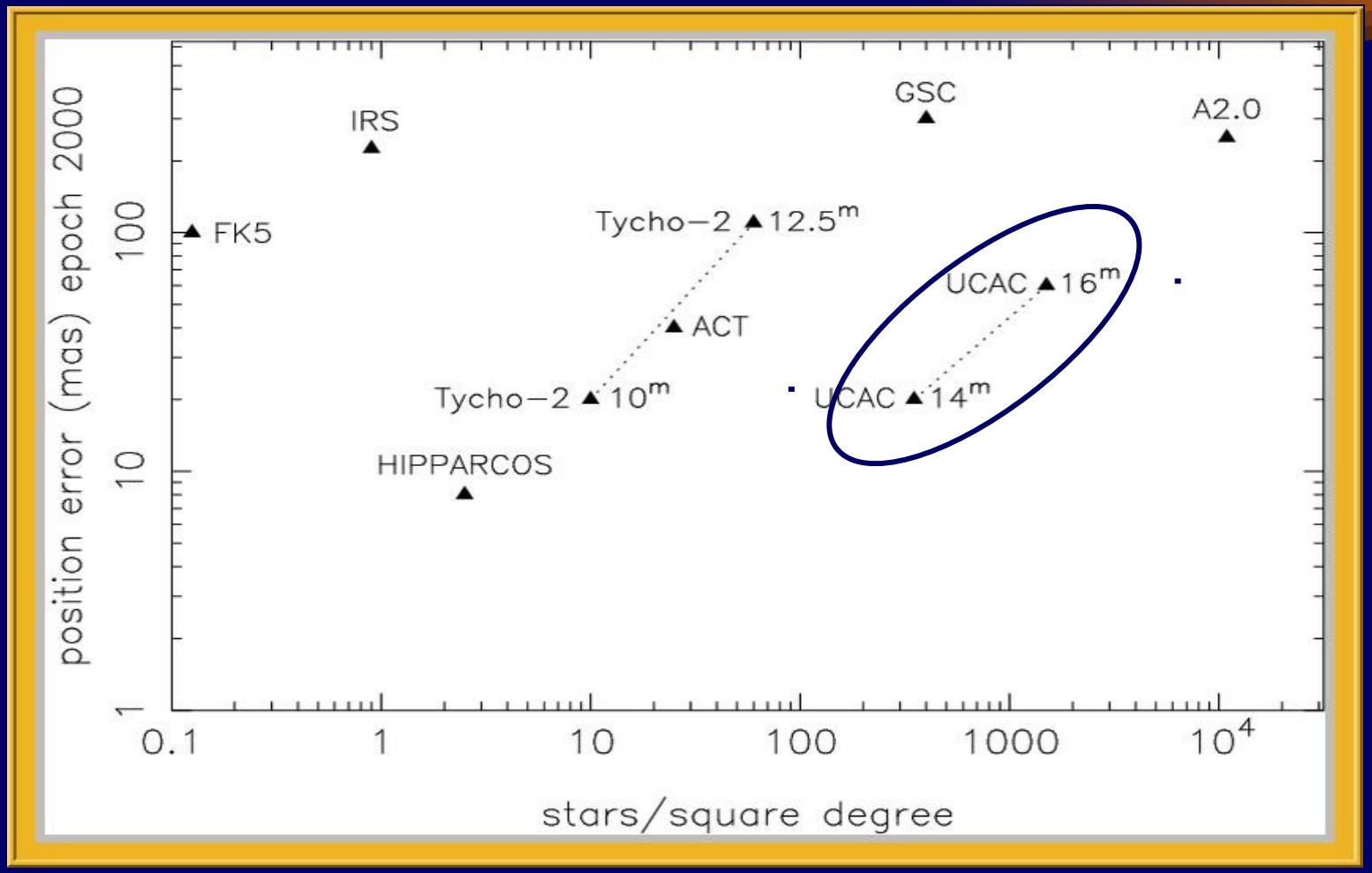
Tycho-2

- Number of stars: 2.54 million
- Mag. Range 0 to 12th
- Accuracies (2000)
  - Pos = 40 mas; P.M. = 1 to 3 mas/yr
- Tycho + TC + Astrographs + AC
- Not obsolete
- More detailed talk following

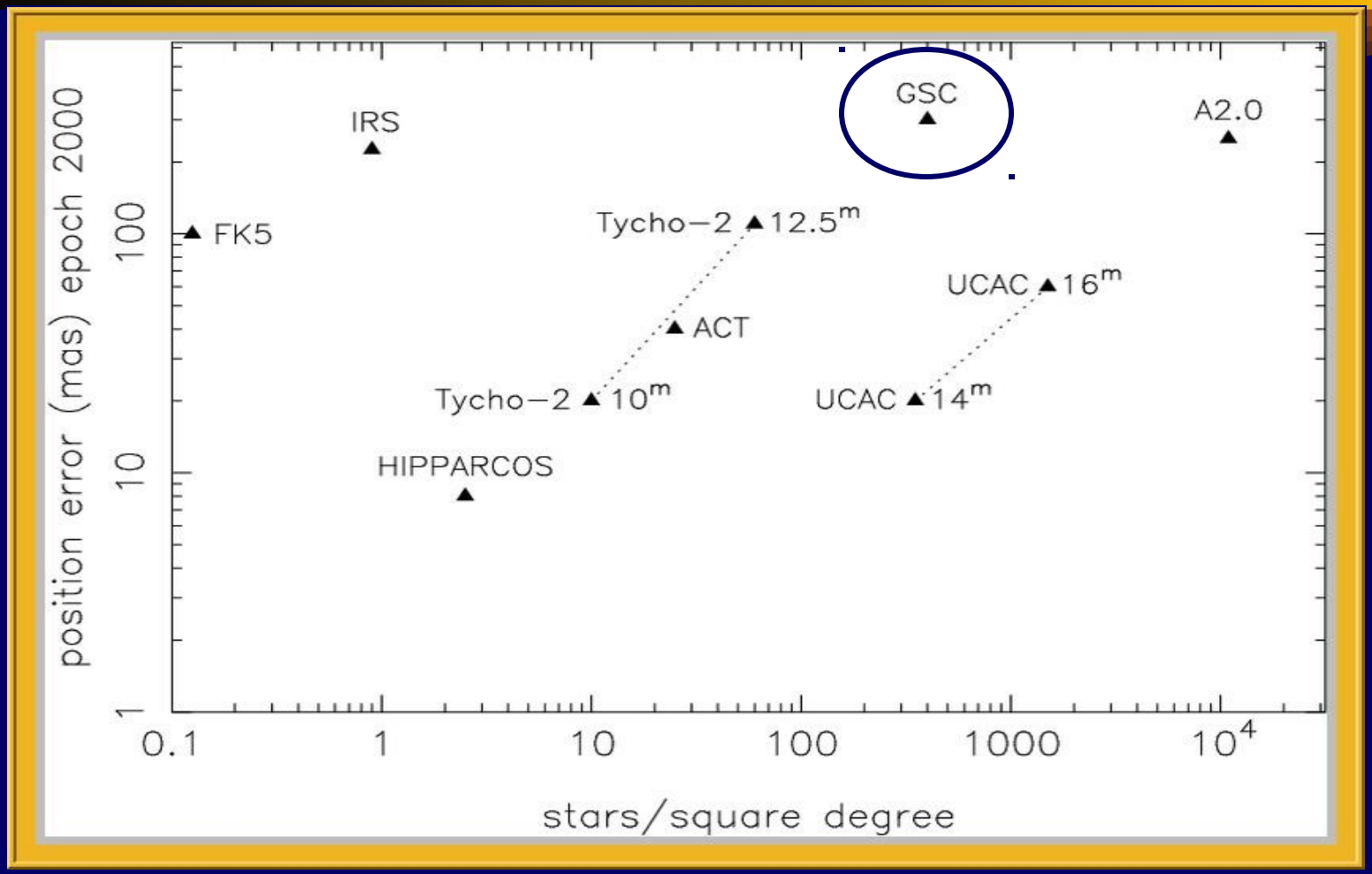
Major Astrometric Catalogs



UCAC1

- Preliminary release March 2000
- Southern hemisphere coverage only
- Mag. Range 8th to 16th
- Accuracies (2000)
  - Pos. 20 to 70 mas; P.M. 2 to 12 mas/yr
- Observing continuing
- More detailed talk on this project follows

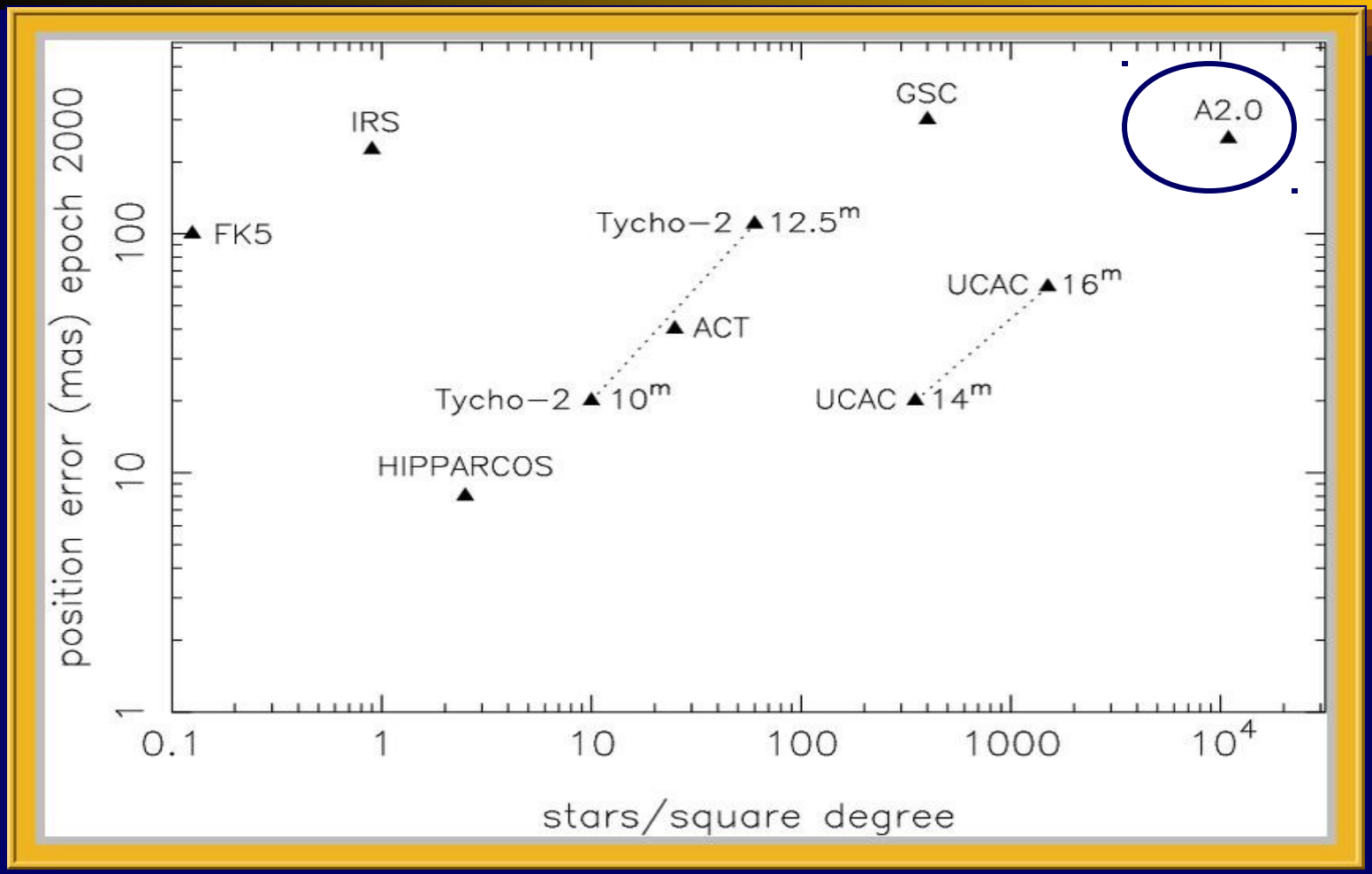
Major Astrometric Catalogs



Guide Star Catalog 1.2

- Number of stars: 19 million
- Mag. Range 6 to 15th
- Accuracies 500 mas?
- Single epoch only, no proper motions
- Recommend using USNO A2.0

Major Astrometric Catalogs



USNO A2.0

- Number of stars: 526 million
- Mag. range: 10 to 20?
- Accuracies 250 mas?
- Single epoch only, no proper motions
- To be replaced with B series
  - More detailed talk following

Summary

- Use Hipparcos, if possible
- Tycho-2 next
- UCAC1 can be used in south
- A2 if requiring very faint or very dense stars
- FK5, IRS, ACRS, PMM, ACT, and GSC are not recommended

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Recommended Catalogs